Clean Development Mechanisms and Agriculture

A Policy Issue Paper Prepared for the Agriculture and Agrifood Climate Change Table

By The

International Institute for Sustainable Development

(Edward Tyrchniewicz, Senior Fellow at IISD, had primary responsibility for the preparation of this paper)

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CLEAN DEVELOPMENT MECHANISMS AND AGRICULTURE

Introduction

The Kyoto Protocol identified a number of "flexibility provisions" to enable Annex 1 countries like Canada to meet their targets for CO_2 emission reductions in a lower cost manner. This includes: investing in activities which store carbon (e.g., sequestration) emissions, trading, and clean development mechanisms (CDM). This paper focuses on the potential for the use of CDMs in the agriculture and agrifood sector. The paper is divided into three sections: What is CDM and how does it work; Some challenges associated with CDM; and How applicable is it to agriculture and agrifood sector. The essential conclusion is that the potential for the use of CDMs in agriculture relative to other sectors is marginal, and therefore, GHG reduction initiation in agriculture should be focused on approaches with more potential for GHG reduction.

What is CDM?

The essential element of CDMs is that they provide incentives for industrialized countries to invest in initiatives in developing countries that reduce net greenhouse gas emissions (IISD, A Guide to Kyoto, 1998). Eligible initiatives typically focus on energy projects such as building small scale hydro plants or replacing old coal-fired electrical generating plants with high efficiency natural gas turbines. Under the CDM, the savings in CO_2 emission will be recorded as a credit, which would be shared among the parties to the transaction.

The concept of CDM is generally seen as a succession to the concept of "Joint Implementation" (JI) which essentially consists of a bilateral agreement between two entities to complete a GHG mitigation project (Toman and Cazorla, 1998). It is a form of emissions trading, and can still be undertaken under the Kyoto Protocol. However, collaborative projects to reduce emissions or sequester carbon in developing countries are now to occur under CDM.

The specific goals of CDM as identified in Article 12 of the Kyoto Protocol include: (1) assist in the achievement of sustainable development, (2) contribute to the attainment of the environmental goals of the Framework Convention, and (3) assist Annex B parties in complying with their emission reduction commitments (Toman an Cazorla, 1998). Specifically Article 12 states that developing countries are to benefit from CDM projects resulting in "certified emission reductions" (CERs) and that industrialized countries may use CERs to meet their emission reduction commitments under the Kyoto Protocol.

Some Challenges Associated with CDM

There are some challenges associated with the implementation of CDM as outlined in the Kyoto Protocol. Not the least of which are concerns by many of the G-77 countries. There is a general concern that this may be the first step in establishing national

commitments under the FCCC in that CDM will require the establishment of baselines, first at the project level, then perhaps at the sectional level, and finally, leading to national calculations (Runnalls, 1998). Poorer developing countries, left out of the earlier JI phase, fear that their infrastructure and development limitations will mean they will be left out again. Also, there is a degree of skepticism among developing countries that these flexibility mechanisms will provide yet another excuse for OECD countries to avoid domestic action on GHG emission reduction.

Aside from the misgivings of developing countries, there are challenges to the implementation of CDM. Proponents of CDM, primarily from industrialized countries, generally emphasize the need of keeping transaction costs low to make the mechanism attractive to the private sector. Developing countries, on the other hand, are more concerned with their sustainable development, and tend to be skeptical of private sector driven initiative. This gives rise to the concern of establishing yet another international bureaucracy to administer the CDM.

An innovative concept like CDM requires incentives to make it viable. Put another way, the risks of implementing CDM must be reduced. The policy environment for early action on CDM requires the following (Runnalls, 1998):

- Clarity of rules and procedures for measurement, verification and accreditation of GHG emission reductions
- Clear credit in Canada for the CDM action taken and the flexibility to bank the credit for future use.
- Agreement between Canada and the developing country that facilitates CDM actions by ensuring that the credit from the action in the developing country is valid for the CDM transaction and for inclusion in the emitter's Canadian action plan.
- Measures that reduce transaction costs and risks.

A critical issue for CDM is the establishment of baselines in developing countries. This would need to move beyond the project-by-project basis quickly in order to reduce transaction costs and risks. Emphasis would need to be placed on ensuring verification and the integrity of the credits.

The current state of affairs on CDM can best be summarized in a report on the preliminary conclusions of the Expert Group Meeting on the CDM and Sustainable Industrial Development held in October 1998. Key points included:

- Left entirely to market forces, the CDM cannot guarantee for Africa the equitable share of technology transfer and resources that might otherwise be available.
- Private sector representations emphasized that the main motivation behind their investments is profitability. CDM projects should provide opportunities for commercially attractive investments.
- Technology transfer remains the key issue on the development co-operation agenda. The success of the CDM will depend largely on its potential for transfer climate-relevant technologies.

How applicable is CDM to the Agriculture and Agrifood Sector

Very little has been written about the applicability of CDM to agriculture. The Expert Group Meeting, eluded to earlier, made no mention of agriculture in its deliberations.

The implementation issues mentioned earlier are indeed daunting, and there appears to have been little progress made on resolving them during the recent COP meeting in Buenos Aires. Given the key role of technology transfer in the CDM process, and assuming that the implementation issues can be resolved, it is possible to identify some areas of agriculturally related technology for further consideration. These could include:

- technology for livestock manure management
- systems to improve irrigation energy efficiency, and
- systems to utilize agricultural wastes in the production of biofuels

Bearing in mind the structure of agricultural production in terms of size of firm and level of international involvement, plus the uncertainty of implementation of CDM, it is unlikely that agricultural firms that are GHG emitters are likely to view CDM as a high priority approach to earning credits. Similarly, finding appropriate partners in developing countries to consider CDMs in agriculture may be equally challenging.

Accordingly, the preliminary conclusion that is being proposed is that the potential for the use of CDMs in agriculture, relative to other sectors, is marginal, and therefore GHG reduction initiatives in agriculture should be focussed on approaches with more potential for GHG reduction.

Reference:

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